



IFW

03500.103457

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
	:	Examiner: Unassigned
SHUICHIRO SAITO)	
	:	Group Art Unit: Unassigned
Application No.: 10/579,571)	
	:	
Filed: May 17, 2006)	
	:	
For: GAS REPLACEMENT METHOD OF)	August 24, 2006
FUEL CELL, FUEL CELL SYSTEM	:	
AND DEVICE FOR FUEL CELL)	
SYSTEM	:	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUBMISSION OF INFORMATION

Sir:

Enclosed for the Examiner's information is a Notification Concerning Transmittal of Copy of International Preliminary Report on Patentability that was received in connection with Applicant's corresponding PCT application.

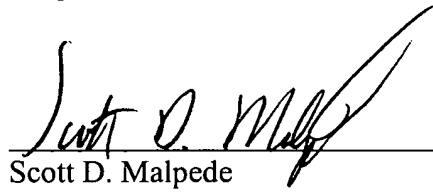
The documents identified in the Written Opinion were cited in the Information Disclosure Statement filed May 17, 2006.

It is submitted that no fee is necessary in connection with this paper.

Nonetheless, any fee deemed necessary should be charged to Deposit Account No. 06-1205.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



Scott D. Malpede
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SDM/vmm

DC_MAIN 251053v1

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)
(PCT Rule 44bis.1(c))

To:

OKABE, Masao
No. 602, Fuji Bldg., 2-3, Marunouchi 3-chome,
Chiyoda-ku, Tokyo
1000005
JAPON



Date of mailing (day/month/year)
15 June 2006 (15.06.2006)

Applicant's or agent's file reference
10003457WO01

IMPORTANT NOTICE

International application No.
PCT/JP2004/018337

International filing date (day/month/year)
02 December 2004 (02.12.2004)

Priority date (day/month/year)
02 December 2003 (02.12.2003)

Applicant

CANON KABUSHIKI KAISHA et al

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Yoshiko Kuwahara

Facsimile No.+41 22 740 14 35

Facsimile No.+41 22 338 90 90

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 10003457WO01	FOR FURTHER ACTION		See item 4 below
International application No. PCT/JP2004/018337	International filing date (<i>day/month/year</i>) 02 December 2004 (02.12.2004)	Priority date (<i>day/month/year</i>) 02 December 2003 (02.12.2003)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant CANON KABUSHIKI KAISHA			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input checked="" type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Date of issuance of this report 07 June 2006 (07.06.2006)
Facsimile No. +41 22 740 14 35	Authorized officer <p style="text-align: center; font-weight: bold;">Yoshiko Kuwahara</p> Telephone No. +41 22 338 90 90

PATENT COOPERATION TREATY

REC'D 31 MAR 2005

From the
INTERNATIONAL SEARCHING AUTHORITY

WIPO

PCT

PCT

To:

OKABE Masao

**No.602, Fuji Bldg., 2-3,
Marunouchi 3-chome,
Chiyoda-ku, Tokyo 100-0005**

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

29.03.2005

Applicant's or agent's file reference

10003457W001

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2004/18337

International filing date (day/month/year)

02.12.2004

Priority date (day/month/year)

02.12.2003

International Patent Classification (IPC) or both national classification and IPC

Int.Cl. **H01M8/04**

Applicant

CANON KABUSHIKI KAISHA

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Date of completion of this opinion

09.03.2005

Name and mailing address of the ISA/JP

Japan Patent Office

3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan

Authorized officer

TAKAGI YASU HARU

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/18337

Box No. I

Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/18337

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:

- ☒ paid additional fees
☐ paid additional fees under protest
☐ not paid additional fees

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

- ☐ complied with
☒ not complied with for the following reasons:

In order for a group of inventions described in Claims to satisfy the requirement of unity of invention, it is necessary that a special technical feature be present that so links the group of inventions as to form a single general inventive concept, whereas it is deemed that the inventions described in Claim 1 through 67 are linked only in the technical matter of being "supplying a fuel from the fuel cartridge or fuel tank to start replacement of gas in the fuel cell system".

However, the technical matter is disclosed in prior art documents, for example, JP 2002-313390 A (Nissan Motor Co., Ltd.), 2002.10.25, JP 2003-168456 A (Nissan Motor Co., Ltd.) 2003.06.13 and JP 2003-142131 A (Toyota Motor Co., Ltd.) 2003.05.16, so that the technical matter cannot be special technical feature.

Therefore there is no technical feature among those inventions of Claims 1 through 67 involving any technical features linking the inventions to form a single general inventive concept so that the inventions of Claims 1 through 67 do not comply with the requirement of unity of invention.

In considering the specific modes of the inventions of the independent claims, there are two groups of inventions: the inventions of Claims 1-4,13-34,47-67; and the inventions of Claims 5-12,35-46.

4. Consequently, this opinion has been established in respect of the following parts of the international application:

- ☒ all parts.
☐ the parts relating to claims Nos. _____

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2004/ 18337

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

I. Statement

Novelty (N)	Claims <u>1-67</u>	YES
	Claims _____	NO
Inventive step (IS)	Claims <u>1-67</u>	YES
	Claims _____	NO
Industrial applicability (IA)	Claims <u>1-67</u>	YES
	Claims _____	NO

2. Citations and explanations

Citations

D1.JP 2002-313390 A (Nissan Motor Co., Ltd.), 2002.10.25, claims1-6,examples
(no family)
D2.JP 2003-168456 A (Nissan Motor Co., Ltd.) 2003.06.13, claims1-7,examples
(no family)
D3.JP 2003-142131 A (Toyota Motor Co., Ltd.) 2003.05.16, claims1-23,examples
(no family)
D4.JP 2002-158022 A (Sony Co., Ltd.) 2002.05.31, claims1-15,examples(no family)
D5.JP 2003-223908 A (Nissan Motor Co., Ltd.) 2003.08.08, claims1-13,examples
(no family)
D6.JP 11-219715 A (TOYOTA CENTRAL R&D LABS.,INC.) 1999.08.10, claims1-2,
examples(no family)
D7.JP 2002-141090 A (Matsushita Electric Industrial Co., Ltd.) 2002.05.17, claims1-4,
examples(no family)

Explanations

The subject matter of claim 1,5,9,13,21,29,35,41,47,54,61 is novel and involves an inventive step over any of the prior art documents D1-D7 cited the international search report.

In particular, "a method of replacing gas in a fuel cell system, comprising the steps of: detecting that a fuel cartridge is connected to a fuel cell system ; and supplying a fuel from the fuel cartridge on the basis of the detection to start replacement of gas in the fuel cell system" or "a method of replacing gas in a fuel cell system, comprising the steps of: detecting an output voltage of a fuel cell provided in a fuel cell system ; and when the output voltage becomes a predetermined value or less, supplying a fuel from the fuel cartridge to start replacement of gas in the fuel cell system" is not disclosed in D1-D7.

It follows that depending claims 2-4,6-8,10-12,14-20,22-28,30-34,36-40,42-46,48-53,55-60,62-67 are allowable as well.